REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed August 18, 2004. In the Office Action, claims 13, 28, 32, 45, and 58 were objected to as being dependent on a rejected base claim, but indicated that the claims would be allowable if rewritten in independent form. Applicants have placed claims 13, 28, 32, 45 and 58 into independent form with certain limitations from the base and intervening claim where applicable.

Furthermore, claims 29-30, 42-43 and 55-56 have been cancelled without prejudice. Claims 31 and 33-39 are now dependent on claim 32. Claims 44 and 46-52 are now dependent on claim 45. Claims 57 and 59-64 are now dependent on claim 58.

Applicant respectfully submits that claims 13, 28, 32, 45 and 58 and those claims dependent thereon are in condition for allowance.

Rejection Under 35 U.S.C. § 102

Claims 1-12, 14-27, 29-31, 33-44, 46-57 and 59-66 were rejected under 35 U.S.C. §102(b) as being anticipated by Varga (EP 913951). Since claims 31, 33-39, 44, 46-52, 57 and 59-64 are now dependent on newly formed independent claims, the §102(b) rejection is moot for these claims.

With respect to independent claims 1 and 15, Applicants respectfully traverse the §102(b) rejection because a *prima facie* case of anticipation has not been established. Most notably, the controller operations set forth in claims 1 and 15 are different from LMS, NLMS or Gauss-Newton recursion techniques as described in Varga. In Varga (see page 3), the updating equation is:

$$h[n+1] = h[n] + \{mu * r\} * y(n) * (y(n-1) - x(n-1))$$

Error Signal — Derivative of Error Signal

Where x(n) and y(n) are the input and the output of the notch filter respectively and h[n] is the updated parameter.

The subject invention has a modified Recursive Prediction Error (RPE) and Pseudolinear Regression (PLR) algorithms,where:

$$h[n+1] = h[n] + \{m_3 * m_1 * m_2\} * y(n-1) * w(n-2)$$

Error Signal — Derivative of Error Signal

where "w(n)" is a filtered version of input. As described on page 7 and illustrated in Figures 2 and 3 of the subject application, Recursive Prediction Error (RPE) algorithm is implemented as follows:

$$w(n) = a^* x[n] + a * k_1 * k_2 * k_3 * k_5 * h[n] * w(n-1) + k_4 * a * w(n-2)$$

For Pseudolinear Regression (PLR) algorithm, "w(n)" is set equal to the input signal (see page 8 of the subject application). W(n) is then delayed by a plurality of samples (e.g., two samples) to generate the derivative of error signal. According to one embodiment of the invention, as shown in Figure 2, w(n-2) is taken from a node inside the filter structure and no extra calculation is required for generating it.

In summary, Varga does not teach the second input signal being altered using a gradient-based algorithm modified so that a derivative of an error signal of the modified gradient-based algorithm is a delayed, filtered first input signal in order to minimize power of the output signal. This limitation is set forth in independent claims 1 and 15.

Hence, Applicants respectfully request withdrawal of the outstanding §102(b) rejection.

Conclusion

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Dated: 11/29/2004

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